# IN THE CLAIMS

The text of all claims under examination is submitted, and the status of each is identified. This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Original): A fluorescent whitening agent, which comprises a mixture of compounds of the formulae

in which

R<sub>1</sub> and R<sub>2</sub> are different and each represents -NH<sub>2</sub>, -NHC<sub>1</sub>-C<sub>4</sub>alkyl, -N(C<sub>1</sub>-C<sub>4</sub>alkyl)<sub>2</sub>,

-NHC<sub>2</sub>-C<sub>4</sub> hydroxyalkyl, -N(C<sub>2</sub>-C<sub>4</sub>hydroxyalkyl)<sub>2</sub>, -N(C<sub>1</sub>-C<sub>4</sub>alkyl)(C<sub>2</sub>-C<sub>4</sub> hydroxyalkyl), a morpholino residue or an amino acid or an amino acid amide residue from which a hydrogen atom has been removed from the amino group, each of the rings designated as

A represent a 5- or 6-membered saturated heterocycle, which may contain one further heteroatom and

M represents hydrogen, an alkali metal atom, ammonium or a cation formed from an amine.

2. (original): A fluorescent whitening agent, according to claim 1, which comprises a mixture of compounds of the formulae

in which

R<sub>1</sub>, R<sub>2</sub> and M are as defined in claim 1.

3. (currently amended): A composition according to claims claim 1-or 2, in which the aliphatic amino acid or amino acid amide residue is of the formula

-NR<sub>3'</sub>-CH(CO<sub>2</sub>H)-R<sub>3</sub> (3) or -NR<sub>3</sub>-CH<sub>2</sub>CH<sub>2</sub>CONH<sub>2</sub> (4), in which each

 $R_3$  and  $R_{3'}$ , independently, represent hydrogen or a group having the formula -CHR<sub>4</sub>R<sub>5</sub> in which

R<sub>4</sub> and R<sub>5</sub>, independently, are hydrogen or C<sub>1</sub>-C<sub>4</sub>alkyl optionally substituted by one or two substituents selected from the group consisting of hydroxy, thio, methylthio, amino, carboxy, sulfo, phenyl, 4-hydroxyphenyl, β-indolyl, β-imidazolyl and NH=C(NH<sub>2</sub>)NH-.

- 4. (original): A composition according to claim 3, in which residues  $R_1$  and/or  $R_2$  are derived from glycine, alanine, sarcosine, serine, cysteine, phenylalanine, tyrosine (4-hydroxyphenylalanine), diiodotyrosine, tryptophan ( $\beta$ -indolylalanine), histidine (( $\beta$ -imidazolylalanine),  $\alpha$ -aminobutyric acid, methionine, valine ( $\alpha$ -aminoisovaleric acid), norvaline, leucine ( $\alpha$ -aminoisocaproic acid), isoleucine ( $\alpha$ -amino- $\beta$ -methylvaleric acid), norleucine ( $\alpha$ -amino-n-caproic acid), arginine, ornithine ( $\alpha$ , $\delta$ -diaminovaleric acid), lysine ( $\alpha$ , $\epsilon$ -diaminocaproic acid), aspartic acid (aminosuccinic acid), glutamic acid ( $\alpha$ -aminoglutaric acid), threonine, hydroxyglutamic acid and taurine, as well as mixtures and optical isomers thereof, or from iminodiacetic acid or from N-(propionamido)-N-(2-hydroxyethyl)amine.
- 5. (currently amended): A composition according to-claims claim 1-or-2, in which R<sub>1</sub> and R<sub>2</sub> represent -N(C<sub>1</sub>-C<sub>4</sub>alkyl)<sub>2</sub>, -NHC<sub>2</sub>-C<sub>4</sub>hydroxyalkyl, -N(C<sub>2</sub>-C<sub>4</sub>hydroxyalkyl)<sub>2</sub>, -N(C<sub>1</sub>-C<sub>4</sub>alkyl)(C<sub>2</sub>- C<sub>4</sub>hydroxyalkyl), a morpholino residue or a residue derived from glycine, sarcosine, taurine, glutamic acid, aspartic acid, iminodiacetic acid or from N-(propionamido)-N-(2-hydroxyethyl)amine.
- 6. (original): A composition according to claim 5 in which
- R<sub>1</sub> represents a mono-(2-hydroxyethyl)amino, a di-(2-hydroxyethyl)amino, a di-(2-hydroxyethyl)amino, a diethylamino, an N-(2-hydroxyethyl)-N-methylamino, a morpholino, an N-(propionamido)-N-(2-hydroxyethyl)amino or a sarcosine residue and R<sub>2</sub> represents an aspartic acid or a glycine residue.
- 7. (currently amended): A composition according to any one of claims claim 1-to 6, in which

M represents hydrogen, lithium, potassium, sodium, ammonium, mono-, di-, tri- or tetra- $C_1$ - $C_4$ alkylammonium, mono-, di- or tri- $C_1$ - $C_4$ hydroxyalkylammonium or ammonium that is di- or tri-substituted with a mixture of  $C_1$ - $C_4$ alkyl and  $C_1$ - $C_4$ hydroxyalkyl groups.

- 8. (original): A composition according to claim 7, in which M represents hydrogen, potassium or sodium.
- 9. **(original):** A process for the preparation of the compound mixture of formulae (1a), (1b) and (1c) by reacting, under known reaction conditions, cyanuric chloride, successively, in any desired sequence, with each of 4,4'-diaminostilbene-2,2'-disulphonic acid, an appropriate heterocyclic compound, an amino compound R<sub>1</sub>H and an amino compound R<sub>2</sub>H, or, alternatively a mixture of amino compounds R<sub>1</sub>H and R<sub>2</sub>H, R<sub>1</sub> and R<sub>2</sub> being as defined in claim 1.
- 10. (original): A compound of the formula

in which

R<sub>1</sub>, R<sub>2</sub>, A and M are as defined in claim 1.

# 11. (original): A compound of formula

in which

 $R_2$  is an amino acid or amino acid derivative from which a hydrogen atom has been removed from the amino group, whereby the residue is derived from alanine, sarcosine, serine, cysteine, phenylalanine, tyrosine (4-hydroxyphenylalanine), diiodotyrosine, tryptophan ( $\beta$ -indolylalanine), histidine ( $\beta$ -imidazolylalanine),  $\alpha$ -aminobutyric acid, methionine, valine ( $\alpha$ -aminoisovaleric acid), norvaline, leucine ( $\alpha$ -aminoisocaproic acid), isoleucine ( $\alpha$ -amino- $\beta$ -methylvaleric acid), norleucine ( $\alpha$ -amino-n-caproic acid), arginine, ornithine ( $\alpha$ , $\delta$ -diaminovaleric acid), lysine ( $\alpha$ , $\epsilon$ -diaminocaproic acid), aspartic acid (aminosuccinic acid), glutamic acid ( $\alpha$ -aminoglutaric acid), threonine or hydroxyglutamic acid, as well as mixtures and optical isomers thereof, or from iminodiacetic acid or from N-(propionamido)-N-(2-hydroxyethyl)amine or the corresponding propionic acid, the heterocyclic ring

A and the symbol M being as defined in claim 1.

12. (currently amended): Use A method for whitening synthetic or natural organic material by treating the synthetic or natural material with of a composition, which contains water, a fluorescent whitening agent, which comprises a mixture of the compounds (1a), (1b) and (1c), according to any one of claims claim 1 to 8, a compound of formula (1b)

according to claim 10 or a compound of formula (1c)

according to claim 11

$$\begin{array}{c|c}
R_2 \\
N \longrightarrow N \\
N \longrightarrow N \\
N \longrightarrow N \\
N \longrightarrow N \longrightarrow N \\
SO_3M \longrightarrow N \longrightarrow N \\
R_2
\end{array}$$
(1c),

### in which

R<sub>2</sub> is an amino acid or amino acid derivative from which a hydrogen atom has been removed from the amino group, whereby the residue is derived from alanine, sarcosine, serine, cysteine, phenylalanine, tyrosine (4-hydroxyphenylalanine), diiodotyrosine, tryptophan (β-indolylalanine), histidine (β-imidazolylalanine), α-aminobutyric acid, methionine, valine (α-aminoisovaleric acid), norvaline, leucine (α-aminoisocaproic acid), isoleucine (α-amino-β-methylvaleric acid), norleucine (α-amino-n-caproic acid), arginine, ornithine (α,δ-diaminovaleric acid), lysine (α,ε-diaminocaproic acid), aspartic acid (aminosuccinic acid), glutamic acid (α-aminoglutaric acid), threonine or hydroxyglutamic acid, as well as mixtures and optical isomers thereof, or from iminodiacetic acid or from N-(propionamido)-N-(2-hydroxyethyl)amine or the corresponding propionic acid, the heterocyclic ring,

and, optionally, auxiliaries, for whitening synthetic or natural organic materials.

- 13. (currently amended): A method for whitening of paper comprising applying to the paper substrate in the pulp mass, in the form of a paper coating composition, or directly in the size press or metering press a mixture. Use according to claim 12 of compounds (1a), (1b) and (1c), a compound (1b) or a compound (1c) according to claim 12 as optical brightening agents for paper in pulp, size-press, metering press or coating applications.
- 14. (currently amended): Paper, which has been optically brightened by the compound mixture of formulae (1a), (1b) and (1c) according to any one of claims claim 1 to 8, a compound of formula (1b) according to claim 10

or a compound of formula (1c)

### in which

R<sub>2</sub> is an amino acid or amino acid derivative from which a hydrogen atom has been removed from the amino group, whereby the residue is derived from alanine, sarcosine, serine, cysteine, phenylalanine, tyrosine (4-hydroxyphenylalanine), diiodotyrosine, tryptophan (β-indolylalanine), histidine (β-imidazolylalanine), α-aminobutyric acid, methionine, valine (α-aminoisovaleric acid), norvaline, leucine (α-aminoisocaproic acid), isoleucine (α-amino-β-methylvaleric acid), norleucine (α-amino-n-caproic acid), arginine, ornithine (α,δ-diaminovaleric acid), lysine (α,ε-diaminocaproic acid), aspartic acid (aminosuccinic acid), glutamic acid (α-aminoglutaric acid), threonine or hydroxyglutamic acid, as well as mixtures and optical isomers thereof, or from iminodiacetic acid or from N-(propionamido)-N-(2-hydroxyethyl)amine or the corresponding propionic acid, the heterocyclic ring,

according to claim 11.

- 15. (currently amended): UseA method according to claim 12, for increasing the Sun Protection Factor (SPF) rating or for the fluorescent whitening of a textile fibre materials.
- 16. (currently amended): A textile fabric produced from a fibre treated with the compound mixture of formulae (1a), (1b) and (1c) according to any one of claims claim 1 to 8, a compound of formula (1b) according to claim 10

or a compound of formula (1c) according to claim 11

$$\begin{array}{c|c}
 & R_2 \\
 & N \\
 & N$$

#### in which

R<sub>2</sub> is an amino acid or amino acid derivative from which a hydrogen atom has been removed from the amino group, whereby the residue is derived from alanine, sarcosine, serine, cysteine, phenylalanine, tyrosine (4-hydroxyphenylalanine), diiodotyrosine, tryptophan (β-indolylalanine), histidine (β-imidazolylalanine), α-aminobutyric acid, methionine, valine (α-aminoisovaleric acid), norvaline, leucine (α-aminoisocaproic acid), isoleucine (α-amino-β-methylvaleric acid), norleucine (α-amino-n-caproic acid), arginine, ornithine (α,δ-diaminovaleric acid), lysine (α,ε-diaminocaproic acid), aspartic acid (aminosuccinic acid), glutamic acid (α-aminoglutaric acid), threonine or hydroxyglutamic acid, as well as mixtures and optical isomers thereof, or from iminodiacetic acid or from N-(propionamido)-N-(2-hydroxyethyl)amine or the corresponding propionic acid, the heterocyclic ring